

- Nov. 19, at 12 23, near *nf* conj.
 12 34, up; difficult to see.
 12 39, considered past.
- Nov. 20, at 5 55, *Mimas* not yet up to *sf* conjunction.
 6 8, thought to be about up.
 6 14, considered past.
- Nov. 22, at 6 55, *Mimas* and *Enceladus* were nearly in a line
 drawn perpendicular to the major axis of
 ring, *Mimas* being nearest the end of
 ring.
 7 4 to 7 6, they were in a line.
 7 19, *Enceladus* much the nearest to end of ring.
 8 24, *Mimas* not yet up to *nf* conjunction.
 8 29, very near, if not up.
 8 34, now up.
 8 41, past; hard to see.

This satellite has been seen at other times, and is generally visible when clear of ring; but it is a most difficult object in my three-foot telescope under the best conditions, when near the end of ring, even now when it is at some little distance apparently, *Hyperion* being very much easier to observe even at conjunction; it is therefore easily seen any fine night, when the Moon is not too near.

Ealing :

1881, December 8.

Note on the Discovery of Comet c 1881 (*Schäberle*).

By W. F. Denning, Esq.

From the heading to Captain Maling's paper in the *Monthly Notices* for November, 1881, p. 49, and from the reports of the meeting of the R. A. S. in the *Astronomical Register* and *Observatory* for December, where it is mentioned that "Captain Maling discovered Comet *c* on the 14th of July, whereas Schäberle discovered it on the 15th of July," it would appear that there is here a claim to priority of discovery which, however, cannot be admitted on many grounds. Schäberle discovered it on the night of July 13, and determined the position as α , $5^h 44^m 59^s$, δ , $+38^\circ 37'$, at $14^h 47^m 30^s$, Washington mean time; whereas Captain Maling's alleged first observation was made on the evening of July 14.

It is evident that the Comet "of considerable magnitude" seen by Captain Maling in the constellation *Camelopardus* was not Schäberle's Comet at all, but Comet *b*, discovered by Tebbutt at Windsor, N. S. W., on May 22, which occupied a position*

* On July 14 at 13^h , the nucleus of Comet *b* was near the star P. IX. 37 (mag. 4.5), in the head of *Camelopardus* (α , $9^h 18^m 38^s$, δ , $+81^\circ 53' 18''$). Capt. Maling says the Comet he saw was about 20° from the horizon, directly under the polar star, which is impossible, because the altitude of *Polaris* at Grenada, West Indies, is only 12° .—W. F. D.

in the same region as that assigned to the object observed by Captain Maling. It could not possibly have been Schäberle's Comet, because it was far below the horizon at the time of Captain Maling's observations; and moreover this Comet was at the middle of July a very small telescopic object, about 1' diameter, and, being immersed in the morning twilight, must have been utterly invisible with a small field-glass such as that used by Captain Maling. The facts clearly show that Comets *b* and *c* have been confused, and the former mistaken for the latter.

Ashley Down, Bristol:
1881, December 7.

Note on Silvering large Mirrors. By A. A. Common, Esq.

The anticipated difficulty of silvering large mirrors face downwards in the ordinary way, caused me to adopt the plan of silvering the mirror of my three-foot reflector face upwards, in the cell in which it had been made. At first a fairly good film of silver was got in this way, and a source of some anxiety was thought to be got over, as the removal of the silver at intervals of about one year was always contemplated; but subsequent attempts were not so successful, and I determined to try the other way.

As the plan I have designed and used for holding the mirror was quite successful, and is, I think, novel, I propose to describe it, especially as I have little doubt that the use of large reflectors will extend. After considering the various mechanical means that could be used to hold the mirror by the edge or back, or both, any of which would be open to the great objection that they might be causing strain of a most injurious kind, in a way that would not become apparent till perhaps too late, I decided to use the pressure of the atmosphere by the application of something in the nature of a large sucker, from which the air could be withdrawn to get the necessary hold on the back of the mirror, which in this case is about thirty-seven inches in diameter, four and a half inches thick, and weighs over four hundred pounds.

To carry out this idea, I had made a cast-iron box or cell, round in shape and about thirty inches diameter, the rim or side being four inches deep. The edge of this rim was turned quite flat and true, and grooved.

For the purpose of attaching the lifting gear three lugs were cast on the bottom, and iron eyes were fitted to them. Two small taps were fixed in the bottom of this box, to which could be attached flexible tubing.

One of these taps closed the connection of the box with a small vacuum gauge, made for the purpose, of quill glass tube in the shape of the letter U, each leg being about twelve inches long; mercury being poured in till it stood about half way up a rough scale on the board to which the gauge was fixed